Remarks

In this response, Applicants have amended Claims 31, 32, 38, 39, 45, and 46. Applicants have presented arguments to overcome the Examiner's rejections.

REJECTION UNDER 35 U.S.C. § 112

The Examiner rejected Claims 34, 36-37, 40-41, 43-44, and 47 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Examiner suggests that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Applicants respectfully disagree with the Examiner.

Applicants have explicitly described all the GLP-1 compounds embodied by the claims. The GLP-1 compounds are described by a specific formula calling out every amino acid in each GLP-1 compound. Applicants respectfully request that the written description rejection be withdrawn.

The Examiner also rejected Claims 34, 36-37, 40-41, 43-44, and 47 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Examiner suggests that the specification does not contain a description of the manner and process of making and using the invention in such full, clear, and concise, and exact terms to enable a skilled person to make and use the invention. Applicants respectfully disagree with the Examiner

The burden is on the Examiner to establish a reasonable basis to question the enablement provided for the claimed invention. *In re Wright*, 999 F.2d 1557 (Fed. Cir. 1993). *See also* MPEP § 2164.04. In examining a patent application, the Examiner is required to assume that the specification complies with the enablement provision of § 112 unless it has acceptable evidence or reasoning to suggest otherwise. *In re Marzocchi*, 439 F.2d 220, 223 (C.C.P.A. 1971).

> [I]t is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain why it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement.

Id. at 224.

Applicants have enabled a novel and nonobvious shelf stable solution formulation as evidenced in the examples. (See pp.15-16 of Applicants' specification). These data alone are sufficient to establish the enablement of the claimed invention. Applicants' claims are limited to a GLP-1 molecule having a specific amino acid sequences. The specification states that the formulations of the present invention have insulinotropic activity – enhancing release of insulin from pancreatic islet cells by providing a formulation which contains an effective amount of a GLP-1 compound (p. 13 of Applicants' specification). Additionally, the GLP-1 receptor is known and characterized. The full-length human GLP-1 receptor sequence was published as early as 1993. (Dillon et al. (1993) Cloning and Functional Expression of the Human Glucagon-like Peptide-1 (GLP-1) Receptor, *Endocrinology,* 133:1907-1910.) Further, several articles are published which describe structure-activity studies with various peptides that interact with the GLP-1 receptor.

(1) Adelhorst et al. (1994) Structure-Activity Studies of Glucagon-like Peptide-1, J. *Biol. Chem.* 269: 6275-6278.
(2) Hjorth et al. (1994) Glucagon and Glucagon-like Peptide 1: Selective Receptor Recognition via Distinct Peptide Epitopes, *J. Biol. Chem.* 269: 30121-30124.
(3) Gallwitz et al. (1996) GLP-1/G1P Chimeric Peptides Define the Structural Requirements for Specific Ligand-Receptor Interaction of GLP-1, *Regulatory Peptides* 63: 17-22.
(4) Mojsov et al. (1992) Structural Requirements for Biological Activity for Glucagon-like Peptide-I, *Int. J. Peptide Protein Res.*. 40:333-343.
(5) Gallwitz et al. (1994) Structure/Activity Characterization of Glucagon-like Peptide-1, *Eur. J. Biochem.,* 225:1151-1156.

Thus, the skilled artisan knows the structure activity relationship between GLP-1 compounds and the GLP-1 receptor. There is no undue experimentation to apply this relationship to the narrow formulation claimed by the Applicants. Applicants respectfully request withdrawal of this rejection.

REJECTION UNDER 35 U.S.C. § 112 SECOND PARAGRAPH

Claims 27-33 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. It is well known in the art that GLP-1 exists in nature as an active peptide starting at position 7. The numbering of amino acids is universally accepted in the scientific community. This rejection should be withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. § 102

Claims 34,36,40-41, 43 and 47 are rejected under 35 U.S.C. 102 (e) as being anticipated by Hoffman (U.S. Patent No. 6,358,924, June 1, 2000), based on the broad recitation of a pH of "about 8.2 to about 8.8" which is undefined in the instant specification. Applicants respectfully disagree. However, to further prosecution, Applicants have amended the claims to remove the word "about." This rejection is now moot and should be withdrawn.

SUMMARY AND CONCLUSION

Applicants respectfully assert that the application is in condition for allowance. The claims are novel, described and enabled, and clear in their meaning.

If, for any reason, the Examiner feels that a telephone conversation would be helpful in expediting the prosecution of this case, the Examiner is urged to call me.

Respectfully submitted,

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